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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,332	04/29/2004	YUI-SHIN FRAN	12889-US-PA	3331

31561 7590 10/10/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER

HINES, ANNE M

ART UNIT PAPER NUMBER

2879

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/709,332

Applicant(s)

FRAN ET AL.

Examiner

Anne M. Hines

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-18 and 22-26 is/are rejected.
- 7) ☒ Claim(s) 6, 7 and 19-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 13, 2006 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 11-14, applicant claims in claim 11 "a second light control layer, disposed over the fluorescence layer corresponding to the second light emitting area." However, in independent claim 1 applicant requires that "a first light control layer, disposed overlapping portions of the fluorescence layer ... such that intensity of light exiting from the first control layer is substantially same as that of light exiting from other portions of the fluorescence that are exposed and not overlapped by the first control layer." Additionally, in claim 5, it is required that "a plurality of first light emitting areas

Art Unit: 2879

and a plurality of second light emitting areas disposed between the first light emitting areas. These requirements are contradictory since claim 5's requirement that only first and second light emitting areas exist combined with claim 1's requirement that portions of the fluorescence layer not overlapped by the first control layer are 'exposed' contradicts with claim 11's requirement that a second light control layer is disposed over the fluorescence layer corresponding to the second light emitting area. The Examiner's understanding of the definition of 'exposed' is that this requires that the 'exposed' areas of the fluorescence layer are visible or open to view¹.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 8-10, 15-18, and 22-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Moon (US 2002/0167273).

Regarding claim 1, Moon discloses a cold cathode fluorescent flat lamp comprising a cavity having a light exit plane (Fig. 5, space containing 26; Page 2, Paragraph [0026]); a discharge gas disposed inside the cavity (Fig. 5, 26; Page 2, Paragraph [0026]); a plurality of electrodes disposed inside the cavity (Fig. 5, 13; Page 2, Paragraph [0025]); a fluorescence layer disposed on an inner wall of the cavity (Fig.

¹ From Merriam-Webster online dictionary definition of "expose."

Art Unit: 2879

5, 21; Page 2, Paragraph [0027]); and a first light control layer disposed overlapping portion of the fluorescence layer corresponding to the light exit plane of such that the intensity of light exiting from the first control later is substantially the same as that of light exiting from other portion of the fluorescence that are exposed and not overlapped by the first control layer (Fig. 5, 19 and portions of 21 on 19; Page 2, Paragraph [0038]; Page 3, Paragraph [0059]; Page 4, Paragraph [0075]), wherein the cold cathode fluorescent flat lamp is used to serve as a backlight source of a liquid crystal display (Page 1, Paragraph [0003]).

Regarding claim 15, Moon discloses a cold cathode fluorescent flat lamp comprising a cavity having a light exit plane and a bottom surface, wherein the light exit plane is opposite to the bottom surface (Fig. 5, space containing 26; Page 2, Paragraph [0026]); a discharge gas disposed inside the cavity (Fig. 5, 26; Page 2, Paragraph [0026]); a plurality of electrodes disposed inside the cavity (Fig. 5, 13; Page 2, Paragraph [0025]); a fluorescence layer disposed on an inner wall of the cavity (Fig. 5, 21; Page 2, Paragraph [0027]); and a first light control layer disposed overlapping portion of the fluorescence layer corresponding to the light exit plane of such that the intensity of light exiting from the first control later is substantially the same as that of light exiting from other portion of the fluorescence that are exposed and not overlapped by the first control layer (Fig. 5, 19 and portions of 21 on 19; Page 2, Paragraph [0038]; Page 3, Paragraph [0059]; Page 4, Paragraph [0075]), wherein the cold cathode fluorescent flat lamp is used to serve as a backlight source of a liquid crystal display (Page 1, Paragraph [0003]).

Regarding claims 2 and 16, Moon further discloses wherein the cavity comprises a first substrate (Fig. 5, 11); a second substrate, disposed over the first substrate (Fig. 5, 23); and a side bar disposed between the first substrate and the second substrate and connected to an edge of the first substrate and an edge of the second substrate (Page 3, Paragraph [0060]). Note that while a side bar disposed between the edges of the first and second substrates is not specifically disclosed by Moon, the Examiner considers it inherent that Moon's disclosure of sealing the upper and lower substrates to maintain a constant distance by a spacer inherently discloses a side bar connected to the edges of the substrates.

Regarding claims 3-4 and 17-18, Moon further discloses wherein the discharge gas is an inert gas comprising argon (Page 1, Paragraph [0012]).

Regarding claims 8-9 and 22-23, Moon further discloses wherein the material of the first light control layer comprises a fluorescent material that is the same as the fluorescence layer (Fig. 5, portions of 21 on 19; Page 3, Paragraph [0059]).

Regarding claims 10 and 24, Moon further discloses wherein the first light control layer comprises a single patterned film layer or a multi-layer stacked patterned film layer (Fig. 5, 19 and portions of 21 on 19).

Regarding claim 25, Moon discloses a cold cathode fluorescent flat lamp comprising a cavity (Fig. 5, space containing 26; Page 2, Paragraph [0026]), having a first substrate (Fig. 5, 11), a second substrate disposed over the first substrate (Fig. 5, 23), a light exit plane and a bottom surface, wherein the light exit plane is opposite to the bottom surface (Fig. 5); a discharge gas, disposed inside the cavity (Fig. 5, 26; Page

Art Unit: 2879

2, Paragraph [0026]); a plurality of electrodes, disposed inside the cavity or outside the cavity (Fig. 5, 13; Page 2, Paragraph [0025]), comprising a plurality of protrusions, wherein the electrodes divide the cavity into at least one sub-cavity, and the sub-cavity is divided by the protrusions of the electrodes into a plurality of first light emitting areas and a plurality of second light emitting areas disposed between the first light emitting areas (Fig. 5, 13); a fluorescence layer, disposed on an inner wall of the cavity (Fig. 5, 21; Page 2, Paragraph [0027]); and a light control layer, disposed over the fluorescence layer on the first substrate, positioned corresponding to the plurality of first light emitting areas to render intensity of light exiting therefrom substantially the same as that of light emitted from the second light emitting areas that are exposed and not overlapped by the light control layer (Fig. 5, 19 and portions of 21 on 19; Page 2, Paragraph [0038]; Page 3, Paragraph [0059]; Page 4, Paragraph [0075]), wherein the cold cathode fluorescent lamp is used to serve as a backlight source of a liquid crystal display (Page 1, Paragraph [0003]). Note that the Examiner understands the phrase "a plurality of electrodes ... comprising a plurality of protrusions" to be anticipated by Moon since electrodes 13 protrude into layer 15.

Regarding claim 26, Moon discloses a cold cathode fluorescent flat lamp comprising a cavity (Fig. 5, space containing 26; Page 2, Paragraph [0026]), having a first substrate (Fig. 5, 11), a second substrate disposed over the first substrate (Fig. 5, 23), a light exit plane and a bottom surface, wherein the light exit plane is opposite to the bottom surface (Fig. 5); a discharge gas, disposed inside the cavity (Fig. 5, 26; Page 2, Paragraph [0026]); a plurality of electrodes, disposed inside the cavity or outside the

Art Unit: 2879

cavity (Fig. 5, 13; Page 2, Paragraph [0025]), comprising a plurality of protrusions, wherein the electrodes divide the cavity into at least one sub-cavity, and the sub-cavity is divided by the protrusions of the electrodes into a plurality of first light emitting areas and a plurality of second light emitting areas disposed between the first light emitting areas (Fig. 5, 13); a fluorescence layer, disposed on an inner wall of the cavity (Fig. 5, 21; Page 2, Paragraph [0027]); and a light control layer, disposed over the fluorescence layer on the first substrate, positioned corresponding to the plurality of second light emitting areas to render intensity of light exiting therefrom substantially the same as that of light emitted from the first light emitting areas that are exposed and not overlapped by the light control layer (Fig. 5, 19 and portions of 21 on 19; Page 2, Paragraph [0038]; Page 3, Paragraph [0059]; Page 4, Paragraph [0075]), wherein the cold cathode fluorescent lamp is used to serve as a backlight source of a liquid crystal display (Page 1, Paragraph [0003]). Note that the Examiner understands the phrase "a plurality of electrodes ... comprising a plurality of protrusions" to be anticipated by Moon since electrodes 13 protrude into layer 15.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moon (US 2002/0167273) in view of Rha (US 2002/0079828).

Regarding claim 5, Moon teaches the invention of claim 1, but fails to teach wherein each of the electrodes comprises a plurality of protrusions.

In the same field of endeavor, Rha teaches a flat fluorescent lamp as a backlight for an LCD panel wherein each of the electrodes comprise a plurality of protrusions (Fig. 4, 33b; Page 2, Paragraph [0035]) in order to provide a flat fluorescent lamp that can be manufactured using an automated system for controlling the density of the electrodes such that uniform luminance can be maintained over the whole area of the lamp (Page 2, Paragraphs [0020] and [0023]; Page 3, Paragraph [0047]).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the invention of Moon to have the electrodes comprise a plurality of protrusions, as disclosed by Rha, in order to use an automated system for controlling the density of the electrodes such that uniform luminance can be maintained over the whole area of the lamp

Allowable Subject Matter

Claims 6-7 and 19-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2879

Response to Arguments

Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne M. Hines whose telephone number is (571) 272-2285. The examiner can normally be reached on Monday through Friday from 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anne M Hines
Patent Examiner
Art Unit 2879

AMH
9/29/02

ms
MARICELI SANTIAGO
PRIMARY EXAMINER